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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
10/519,898	12/22/2004	Satoshi Mizutani	112857-485	2740				
29175 K&L Gates LLP P. O. BOX 1135 CHICAGO, IL 60690	7590 09/17/2009		<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">MARTIN, ANGELA J</td></tr></table>		EXAMINER		MARTIN, ANGELA J	
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			<table border="1"><tr><td>NOTIFICATION DATE</td><td>DELIVERY MODE</td></tr><tr><td>09/17/2009</td><td>ELECTRONIC</td></tr></table>	NOTIFICATION DATE	DELIVERY MODE	09/17/2009	ELECTRONIC	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chicago.patents@klgates.com

### Office Action Summary

**Application No.**

10/519,898

**Applicant(s)**

MIZUTANI ET AL.

**Examiner**

ANGELA J. MARTIN

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29, 31, 33, 34, 45, 47, 49 and 50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29, 31, 33, 34, 45, 47, 49 and 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/1/09 has been entered.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 29, 31, 33, 34, 45, 47, 49, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al., U.S. Pat. No. 6,949,312 B1.

Kawakami et al., teach an anode active material comprising: an alloy material including an element M capable of being alloyed with lithium selected from metal elements and metalloid elements and at least one kind of element R selected from elements with an atomic number of 20 or less, except for hydrogen, lithium and a noble gas (abstract; X in Kawakami et al., equivalent to R in application; A

in Kawakami et al., equivalent to M in application), wherein as the element M, tin and at least one kind selected from the group consisting of nickel, copper, iron, cobalt, manganese, zinc, indium and silver are included (col. 10, lines 1-5), the content of the element R ranges from about 1 wt % to about 30 wt % (col. 13, lines 11-13); the alloy material includes a reactive phase with lithium, and a half-width of a diffraction peak obtained by X-ray diffraction analysis of the reactive phase is about 5 degrees or more (col. 10, lines 13-21). An anode active material according to claim 29, wherein as the element R, at least one kind selected from the group consisting of boron, carbon, aluminum, silicon, phosphorus and sulfur is included (abstract; X in Kawakami et al., equivalent to R in application; A in Kawakami et al., equivalent to M in application). An anode active material according to claim 29, wherein the specific surface area ranges from about 1.0 m.sup.2/g to about 70 m.sup.2/g (col. 10, lines 23-26). An anode active material according to claim 29, wherein the median size is about 50 .mu.m or less (col. 10, lines 18-22). A nonaqueous electrolyte secondary battery, comprising: a cathode; an anode; and a nonaqueous electrolyte, wherein the anode includes an alloy material including an element M capable of being alloyed with lithium selected from metal elements and metalloid elements and at least one kind of element R selected from elements with an atomic number of 20 or less except for hydrogen, lithium and a noble gas (abstract), wherein a content of the element R in the alloy material ranges from about 1 wt % to about 30 wt % (col. 13, lines 11-13), the alloy material includes a reactive phase with lithium, and a half-width of a

diffraction peak obtained by X-ray diffraction analysis of the reactive phase is about 5 degrees or more (col. 10, lines 13-21). An nonaqueous electrolyte secondary battery according to claim 45, wherein the alloy material includes at least one kind selected from the group consisting of boron, carbon, aluminum, silicon, phosphorus and sulfur (abstract; X in Kawakami et al., equivalent to R in application; A in Kawakami et al., equivalent to M in application). An nonaqueous electrolyte secondary battery according to claim 45, wherein the alloy material includes tin and at least one kind selected from the group consisting of nickel, copper, iron, cobalt, manganese, zinc, indium and silver as the element M (col. 10, lines 1-5). A nonaqueous electrolyte secondary battery according to claim 45, wherein in the alloy material, a specific surface area ranges from about 1.0 m.sup.2/g to about 70 m.sup.2/g (col. 10, lines 23-26). A nonaqueous electrolyte secondary battery according to claim 45, wherein in the alloy material, the median size is about 50 .mu.m or less (col. 10, lines 18-22).

Thus, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because although the prior art of record does not teach an example where Ni, Cu, Fe, Co, Mn, Zn, In, Ag have a half-width of a diffraction peak of 5 degrees or more, it teaches a half-width of "most preferably greater than 1.0 degree" (col. 10, lines 6-11), which overlaps the claim limitation and meets the claim limitation of "about 5 degrees or more." In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257,

191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). "[ A ] prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a prima facie case of obviousness." *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003). >See also *In re Harris*, 409 F.3d 1339, 74 USPQ2d 1951 (Fed. Cir. 2005). Additionally, the half-width is determined by the grain size of the particle as well as the method of preparation of the material.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGELA J. MARTIN whose telephone number is (571)272-1288. The examiner can normally be reached on Monday-Friday from 10:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJM  
/Angela J. Martin/  
Examiner, Art Unit 1795